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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,068	06/15/2000	David S. Tait	7125	9142

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EXAMINER
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TRINH, SONNY

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

	<b>Application No.</b> 09/595,068		<b>Applicant(s)</b> TAIT, DAVID S.
	<b>Examiner</b> Sonny TRINH	<b>Art Unit</b> 2681	

## Office Action Summary

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2002.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All   b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-37 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-2, 4, 13-14, 17-18, 28-29, 32, 37** are rejected under 35 U.S.C. 102(b) as being anticipated by Terk ("Terk"; U.S. Patent Number 6,075,330).

Regarding **claim 1**, with reference to figure 1, Terk discloses a system for automatically positioning an antenna (column 2) comprising:

a motor arranged to be coupled to the antenna (figure 1, motor 16); and,

a controller coupled to the motor (figure 1 controller 22), wherein the controller is arranged to control the motor (figure 1, controller 22 controls motor 20, 16) in response to selection of a channel so as to automatically drive the antenna to a position at which the antenna is aimed at a source of a signal associated with the selected channel, and wherein the controller drives the motor to the position based upon a location of the signal source and a location of the antenna (column 2 line 5 to column 3 line 48).

Regarding **claims 2, 4, and 14** Terk further discloses that the controller stores the location of the signal source and the location of the antenna in memory (column 5 lines 33-54).

Regarding **claim 13**, Terk teaches the controller as claimed in the instant application as an apparatus component of the system as discussed in claim 1 above and is therefore rejected for the same reasons.

Regarding **claim 17**, Terk further discloses that the controller performs a calibration based upon a position of the antenna providing the best reception from a signal source (column 1 lines 60-63, column 2 lines 47-56).

Regarding **claim 18**, Terk further discloses that the signal source is the source of the signal associated with the selected channel (column 2 lines 47-56).

Regarding **claim 37**, Terk discloses a method of positioning an antenna (column 2) comprising:

in response to a re-tuning of the RF receiver to a second RF channel, re-positioning the antenna in order to point the antenna toward a second RF signal source of the second RF channel, wherein the second RF signal source has a second location, wherein the first and second locations are different (column 3 lines 5-20), and wherein the second location is stored in the memory and is used to position the antenna so that the antenna points toward the second RF signal source (column 2, lines 29-46). Even though Terk does not explicitly disclose the first position and the storing of the first location in memory, it is inherent since Terk teaches that multiple locations and different channel selections is stored. (column 2 lines 29-46, column 3, specifically lines 35-48).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 3, 5, 12, 15, 27, 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330) in view of Babitch ("Babitch"; U.S. Patent Number 5,347,286).

Regarding **claims 3, 5, 15**, Terk discloses the invention but does not disclose that location of the antenna is supplied by a global position sensor. In an analogous art, Babitch teaches an automatic antenna pointing system based on global positioning system (GPS). Babitch further discloses that the location of the antenna is supplied by a global position sensor (figure 7, GPS sensors 208, 210, column 18 lines 8-65).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system for automatically positioning an antenna of Terk, the GPS sensors, as taught by Simpson, so that the location of the antenna can be accurately defined.

Regarding **claims 12, 27**, since Babitch teaches that the television signal is broadcast through an orbiting communication satellite (columns 1, 3), it is obvious that the location of the signal source and the location of the antenna are global locations.

4. **Claims 6, 16, 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330) in view of McNabb et al. ("McNabb"; U.S. Patent Number 6,016,120).

Regarding **claims 6 and 16**, Terk discloses the invention but does not disclose that the controller is arranged to drive the motor in response to a compass reading derived from a compass. In an analogous art, McNabb teaches a method and apparatus for automatically aiming an antenna to a distant location. McNabb further teaches the use of a compass for the antenna's orientation (figures 3a-3b, column 2 lines 34-65, column 5 lines 20-42).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system for automatically positioning an antenna of Terk, the compass, as taught by McNabb, so that a reference azimuth for the local antenna can be determined.

5. **Claims 7-8, 19-24, 33-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330) in view of Ma et al. ("Ma"; U.S. Patent Number 4,801,940).

Regarding **claims 7-8 and 19**, Terk discloses the invention but does not disclose that the controller stores a location of a known offending source and reduces reception of a signal from the known offending source based upon the location of the known offending source and wherein the controller blocks reception of the signal from the

known offending source only if the known offending source is effectively in the reception path between the antenna and the signal source.

In an analogous art, Ma teaches a satellite seeking system for antennas. Ma further teaches the apparatus and method wherein the controller stores the present location (figure 7, block 451) and noise figure (figure 7, block 452) the seeks optimal signal reception of the selected channel (column 7 line 60 to column 8 line 3 and column 8 lines 38-60), thereby suggesting that a known offending source location is stored and reception from which is to be subsequently reduced and reception blocked by the controller base upon movement to an optimal reception location.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system for automatically positioning an antenna of Terk, the reducing of the signal from the known offending source, as taught by Ma, so that a good reception is achieved by eliminating most of the offending signal sources.

Regarding **claim 20**, Ma further discloses that a location of the known offending source is stored in memory of the controller (column 8 lines 4-30).

Regarding **claim 21-24**, it is inherent that ghosts will be cancelled as an anomaly of poor signal reception. As further taught by Ma, optimal signal reception (including ghosts cancellation) is achieved dependent upon geographical topography that is stored in the memory (i.e., currently available computer charts) of the controller (see column 7 lines 8-30).

6. **Claims 9-10, 25, 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330) in view of Holmes ("Holmes"; U.S. Patent Number 4,359,760).

Regarding **claims 9-10, 25**, Terk discloses the invention but does not disclose a variable gain amplifier electrically coupled between the antenna and a receiver tuned to the channel selected by the user, wherein the controller controls the gain of the variable gain amplifier according to the location of the signal source nor the controller is arranged to cancel ghosts depending upon the position of the antenna. In an analogous art, Holmes teaches a television ghost cancellation system. Holmes further teaches variable gain amplifier electrically coupled between the antenna and a receiver tuned to the channel selected by the user (figure 2, column 3, specifically lines 22-37) for canceling ghost image (column 6 lines 41-48)

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system for automatically positioning an antenna of Terk, the variable gain amplifier, as taught by Holmes, so that ghost image can be eliminated (see column 6 lines 41-48).

7. **Claims 11, 26, 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330) in view of Juroff et al. ("Juroff"; U.S. Patent Number 3,691,444).

Regarding **claims 11, 26**, Terk discloses the invention but does not disclose that the antenna comprises first and second antennas, and wherein the controller is



arranged to switch between the first and second antennas depending upon the channel selected by the user. In an analogous art, Juroff teaches a remote controlled television tuner motor control circuit. With reference to figure 1, Juroff further teaches the antenna comprises first and second antennas (figure 1, antenna 10 and 17), and wherein the controller is arranged to switch between the first and second antennas (figure 1, switches 88,103 depending on the channels selected VHF or UHF) depending upon the channel selected by the user (columns 3-4).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system for automatically positioning an antenna of Terk, the different antennas, as taught by Juroff, so that different channels can be selected such as UHF channels and VHF channels.

Regarding **claims 28-36**, these claims merely reflect the method claims to the apparatus claim of claims 13-17, 19, 22, 25-26 (respectively) and are therefore rejected for the same reasons.

### ***Conclusion***

***Any response to this action should be mailed to:***

*Commissioner of Patents and Trademarks  
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***or faxed to:***

*(703) 872-9314, (for formal communications intended for entry, for informal or draft communications, please label "PROPOSED" or "DRAFT")*

Art Unit: 2681

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, 6<sup>th</sup> Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonny Trinh whose telephone number is (703) 305-1961. The examiner can normally be reached Monday through Thursdays from 7:00 am to 4:00 p.m., and on alternate Fridays.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

*Sonny Trinh* 

Patent Examiner

11/17/02